Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Previously presented) A method for control of data flow in a packet data
transmission system based on filtering and performing actions on packets transmitted through
a network, according to predetermined packet processing rules characterized in that to the
data processing system comprising a network of nodes including input nodes (**IN1 - INn**),
output nodes (**OUT1 - OUTn**) and intermediate nodes including data processing nodes
(**PROC1 - PROCn**) or multiplexers (**MUX1 - MUXo**), data is supplied to the input nodes
(**IN1 - INn**) of the system, and from the data packets read from these nodes (**IN1 - INn**)
transmission units are formed, and each of the nodes is assigned input and output rules as
well as general rules (**R**) and whenever a packet is available at the node input (**PROC1 -
PROCn, MUX1 - MUXo, OUT1 - OUTn**), a check is made whether the general rules apply
to a given unit, and in case of a positive result of this check, the commands, determined by
these rules, are executed, and then a check is made whether the input rules of the given node
apply to a given unit and if they do, the commands, determined by these rules, are executed
and then the node (**IN1 - INn, PROC1 - PROCn, MUX1 - MUXo, OUT1 - OUTn**)
functions are preformed and a check is made whether the output rules apply to a given unit
and in case of a positive result of this check, the commands, determined by these rules, are
executed, and then in the output nodes (**OUT1 - OUTn**), the packets are extracted from
transmission units, which are created by adding a label field, a type field and/or a size field
to the packet and, when a rule is a conversion rule, a check is made whether a given
conversion algorithm requires additional rules being present and if it does and the additional

rules are not present, the packet is rejected and the packets to which the rule applies are

defined by specifying their label, type, size or similar parameters.

2.   (Previously presented) The method according to claim 1, characterized in that in the

input nodes (**IN1 - INn**) the transmission units are assigned labels, which identify the input

node (**IN1 - INn**), which a given unit originates from.

3.   (Previously presented) The method according to claim 1, characterized in that the

rules define a command assigning labels to a transmission unit and/or the rules define a

filtering command, the filtering being achieved by replacing packets of given transmission

units with empty packets.

4.   (Canceled)

5.   (Previously presented) The method according to claim 1, characterized in that the

rules define a transmission unit range filtering command, the filtering being achieved by

replacing packets of transmission units within a given range with empty packets and/or the

rules define a command for replacing identification fields of packets in units, the command

being implemented by replacing values in given fields with different ones.

6.   (Canceled)

7.   (Currently amended) The method according to claim 1, characterized in that the rules define a ~~keep-units~~ <u>keep</u> command, the keeping being achieved by passing on only certain transmission units and replacing packets in the remaining transmission units with empty packets and/or by passing on only certain range of transmission units and replacing packets in the remaining transmission units with empty packets.

8.   (Canceled)

9.   (Currently amended) The method according to claim 1, characterized in that the rules define a ~~skip-units~~ <u>skip</u> command, the skipping being achieved by passing on only certain transmission units and deleting the remaining transmission units and/or by passing on only certain range of transmission units and deleting the remaining transmission units.

10.   (Canceled)

11.   (Previously presented) The method according to claim 1, characterized in that the rules define an assign command, the command being implemented by assigning a defined value to a predetermined packet identification field in all packets that the rule applies to and which comprise the identification field and/or the rules define a conversion command, the command being implemented by conversion of packets of transmission units from a given format to another predetermined format.

12-13. (Canceled)

14.   (Currently amended) A method for control of data flow in a packet data transmission

system provided with nodes having ~~node-specific~~ node functions, the method comprising the

steps of:

encapsulating packet data into transmission units at input nodes;

assigning rules to each node, the rules defining additional functions to be performed by the

node and being one of general rules applying to all transmission units processed in the node,

input rules applying to transmission units incoming at a specific input of the node and output

rules applying to transmission units outgoing from a specific output of the node;

processing data in each node by performing sequentially ~~the~~ functions defined by general

rules, ~~the~~ functions defined by the input rules, the ~~node-specific~~ node functions and ~~the~~

functions defined by the output rules; and

~~decapsulating~~ converting transmission units ~~into~~ to outgoing packet data at the output nodes.

15.   (Previously presented) The method according to claim 1, wherein additionally a label

is assigned to each transmission unit while encapsulating, the label identifying the input

node, from which the transmission unit originates.

16.   (Previously presented) The method according to claim 1, wherein the rules define a

label command, which causes assigning a label to each transmission unit.

17.   (Previously presented) The method according to claim 1, wherein the rules define a filter command, which causes replacing specific data packets in the transmission units with empty data packets.

18.   (Previously presented) The method according to claim 1, wherein the rules define a remap command, which causes remapping of specific values in a specific field within data packets in the transmission units.

19.   (Previously presented) The method according to claim 1, wherein the rules define a keep command, which causes passing transmission units with data packets having specific values of a specific field, and replacing data packets of all other transmission units with empty data packets.

20.   (Previously presented) The method according to claim 1, wherein the rules define a skip command, which causes passing transmission units with data packets having specific values of a specific field, and removing all other transmission units.

21.   (Previously presented) The method according to claim 1, wherein the rules define an assign command, which causes setting a specific field of packets in transmission units to a specific value.

22.   (Previously presented) The method according to claim 1, wherein the rules define a convert command, which causes converting a format of chosen packets in transmission units.

23.   (Currently amended) The method according to claim [[9]] 1, further comprising the steps of:

checking if in the output nodes exist a specific conversion algorithm and further rules required for conversion of the chosen data packets, the checking made prior to converting the format of the chosen data packets in the transmission units;

executing the specific conversion algorithm if the specific conversion algorithm and further rules required for conversion of the chosen data packets exist in the output nodes; and

rejecting the transmission unit if no specific conversion algorithm and further rules required for conversion of the chosen data packets exist in the nodes.

24.   (Currently amended) A device for data flow control in a packet data transmission system, the device comprising:

input nodes, having node-specific node functions related to encapsulating incoming data packets into transmission units;

intermediate nodes, having node-specific node functions related to processing transmission units, whose inputs are connected to the outputs of the input nodes or other intermediate nodes;

output nodes, having ~~node-specific~~ node functions related to ~~decapsulating~~ converting

transmission units ~~into~~ to outgoing data packets, whose inputs are connected to the outputs of

the input nodes or intermediate nodes,

wherein the input nodes, the intermediate nodes and the output nodes have assigned rules, the

rules defining additional functions to be performed by the input nodes, the intermediate

nodes and the output nodes and being one of general rules applying to all transmission units

processed in the node, input rules applying to transmission units incoming at a specific input

of the node, and output rules applying to transmission units outgoing from a specific output

of the node ~~, and wherein the priority of performing node-specific and rule-defined functions~~

~~while processing data incoming to each node is defined in the following order, starting from~~

~~the highest priority: functions defined by general rules, functions defined by input rules,~~

~~node-specific functions and functions defined by output rules~~.

25.   (Previously presented) The device according to claim 24, wherein the intermediate

nodes are data processing nodes and multiplexers.

26.   (Previously presented) The device according to claim 24, wherein each of the

transmission units consists of a header and a data packet, and the header comprises a label,

defining the input node, from which a given transmission unit originates.